

REMARKS

Claims 1, 2, 4-16, 18-25, 27-31, 33-36, 38-42, and 44-81 are pending in the application prior to the entry of this amendment.

The Examiner objects to claim 76 because it depends from a previously cancelled claim.

The Examiner rejects claims 1, 2, 6, 8, 9, 12, 14-16, 33, 38, and 40-42 under 35 U.S.C. § 103(a) as being unpatentable over Interrante et al. (U.S. Patent No. 6,011,783) in view of Fraser (U.S. Patent No. 6,487,200).

The Examiner rejects claims 5, 7, 9, 11, 13, 18-21, 23, 25, 27-30, 34-36, 45-47, 49, 51, 52, 55, 57-61, 63, 64, 72, 74, 75, and 77-81 under 35 U.S.C. § 103(a) as being unpatentable over Interrante in view of Fraser (U.S. Patent No. 6,487,200 B1) and further in view of Légaré (U.S. Patent No. 6,400,802).

The Examiner rejects claims 39, 53, and 70-71 under 35 U.S.C. § 103(a) as being unpatentable over Interrante in view of Fraser and further in view of Meek (U.S. Patent No. 5,745,564).

The Examiner rejects claims 4 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Interrante in view of Fraser and further in view of Tol et al. (U.S. Patent No. 4,918,685).

The Examiner rejects claims 22, 31, and 65-69 under 35 U.S.C. § 103(a) as being unpatentable over Interrante in view of Fraser and in view of Légaré and further in view of Suzuki (U.S. Patent No. 5,533,121).

The Examiner rejects claim 24 under 35 U.S.C. § 103(a) as being unpatentable over Interrante in view of Fraser in view of Légaré and further in view of Younce et al. (U.S. Patent No. 5,274,705).

The Examiner rejects claims 44, 50, 56, 62 and 73 under 35 U.S.C. § 103(a) as being unpatentable over Interrante in view of Fraser in view of Légaré and further in view of Tol.

The Applicant amends claim 76.

The Applicant adds no new matter and requests reconsideration.

Claim Objections

The Applicant amends claim 76 to depend from claim 2 obviating the Examiner's claim objection.

Claim Rejections Under § 103(a)

The Applicant traverses the Examiner's rejection of the claims for the reasons that follow.

The Examiner recognizes that Interrante does not disclose a packetized excitation signal that is generated external to the echo canceller and transmitted through a network. The Examiner then alleges Fraser teaches the missing limitations since, according to the Examiner, it discloses the use of packets sent through a network to control diagnostic testing of network devices. The Examiner concludes that it would have been obvious to a person of skill in the art at the time of the invention to apply packet controlled diagnostic testing as taught by Fraser to the method of Interrante for the purpose of simplifying the telephone system.

The Applicant disagrees. Interrante discloses "an embedded...monitoring circuit" that "comprises three units, namely, a test data injection unit, an echo path simulator unit, and a test data extraction unit." Interrante, Abstract. Interrante injects test data into a stream 13 responsive to a control word received from a microprocessor and stored in register 21. The control word specifies a timeslot in which the test data is injected into the stream 13. "Next, test data injection unit 10 receives the test data from the microprocessor and stores the test data in a shift register 24." Interrante, column 2, lines 9-19. That is, the control word that indicates to the test data injection unit to inject the test data into the data stream 13 is distinct and separate from the test data itself. Interrante's stream 13 does not include the control word as is evident from Figures 1-3. The Examiner appears to readily acknowledge this distinction by stating that Interrante does not disclose "the excitation signal being packetized".

The Examiner uses Fraser to supply the missing limitation. But Fraser fails as well. The Applicant recognizes that Fraser teaches a packet telephone system that "employs a packet network." Fraser, Abstract.

But nowhere does Fraser disclose a packet that includes control and test portions as recited. Combining Interrante with Fraser, therefore, does not result in a packetized excitation signal that includes control and test portions as recited. A packet is a unit of binary data capable of being routed through a computer network. Although the packet typically includes a header and a body (test portion), and might additionally include a footer, it is a single unit or signal. At best, the combination of Interrante and Fraser provides for two distinct signals or perhaps packets (one for data and one for control) being sent at two distinct times (since Interrante operates on data after it receives the control word) and received at two

different terminals. The combination of Interrante and Fraser does not disclose a single packetized excitation signal that includes both control and test portions transmitted substantially simultaneously in one packet signal.

Claim 8 recites *encoding the preamble portion in such a way as to be capable of being differentiated from the test portion*. The Examiner alleges Interrante's control word and test data are inherently differentiable since the control word is stored in register 21 and the test data is stored in shift register 24. This, of course, is the very argument we propose above. Interrante's signals are not so much inherently differentiable as they are distinct and separate signals. The excitation signal recited is a single, indistinct packetized signal, with differentiable control and test portions included therein. It appears to the Applicant that the Examiner's argument with regard to claim 8 and other claims reciting a similar limitation bolsters the Applicant's argument that the combination of Interrante and Fraser do not constitute prima facie obviousness.

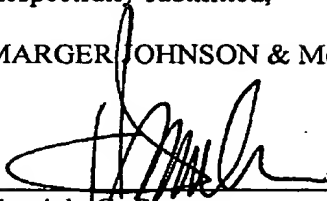
Furthermore, all independent claims recite *transmitting the excitation signal to the echo canceller through a network*. Here, again, the Examiner readily acknowledges that Interrante does not disclose such a transmission but alleges Fraser provides the missing link. But while Fraser discloses transmission of packets through a network, it does not necessarily disclose transmitting the packetized excitation signal *to the echo canceller* through a network. Fraser discloses "echo cancellation code 517" in its memory 427 (Figure 5) but fails to identify the purpose and functionality of such code. Fraser mentions echo cancellation code 517 exactly once, and then only to indicate it as included in memory 427. Such a disclosure is critical to determining whether code 517 is disclosing the echo canceller recited in the claims. Without it, the Examiner fails to make a prima facie case of obviousness. Even if, arguendo, the code 517 is the echo canceller recited, Fraser discloses nothing about transmitting an excitation signal (presumably to test the echo code 517 in another NIU 113) through a network.

Conclusion

The Applicant requests allowance of all claims as amended. The Applicant encourages the Examiner to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.



Graciela G. Cowger
Reg. No. 42,444

MARGER JOHNSON & McCOLLOM, P.C.
1030 SW Morrison Street
Portland, OR 97205
(503) 222-3613
Customer No. 20575